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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/576,503

04/18/2006

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EXAMINER

BADR, HAMID R

ART UNIT

PAPER NUMBER

1794

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/576,503	Applicant(s) BOULIS, YANNICK	
	Examiner HAMID R. BADR	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7/24/2006</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Objection to claims

Claims 1 and 7 are objected to for “diary”. This word is misspelled. Correction is required.

Claim 5 is objected to for “animal of plant origin”. This phrase is expected to be “animal or plant origin”. Correction is required.

Objection to Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: “14” and “19”. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 5 recites the limitation "organic product" in claim 1. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-15, and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by DE 1922259 (Machine translation, hereinafter R1).

3. R1 discloses a process for recovery of milk enzymes from milk, whey, butter milk, yogurt milk, (page 1, P-1). Given the raw material as milk, whey, butter milk or yogurt milk, it is clear that the dry matter in these materials is not more than 30%.

4. R1 discloses that lactoglobulins, lactalbumins, immunoglobulins, special serum albumin, lactoferrin can separate together with enzymes. (page 1, P11).

5. R1 discloses that in the first adsorption stage, diatomaceous earth at normal temperature and pH between 3-8 is brought into contact with the protein containing liquid. (page 3, P-3). Silica gel, quartz powder, bentonites, natural or artificial zeolites, oxycellulose and calcium phosphate can also be used. (page 3, P-4).

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6. R1 discloses that what is adsorbed to the diatomaceous earth or other adsorbents can be separated, washed and dried. The adsorbed material can be eluted from the adsorbent using electrolyte solutions or alkaline buffer. (page 3, P-5).

7. R1 discloses that the proteins of the first adsorption stage, remaining in the filtrate of the first stage, may further be re-adsorbed onto a finer diatomaceous earth material. (page 4, P-1).

8. R1 discloses other stages of separation and purification of enzymes contained in the raw materials. Such separations can be effectuated through the use of ammonium sulphate or the use of alcohol or acetone. (page 4, P-4—10).

9. Given that R1 discloses the use of milk whey and the isolation of contained proteins, the dry solid matter in the dairy by product flow will be in the range as presently claimed.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

11. Claims 1-15, and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Ayers et al. (US 6,528,622; hereinafter R2).

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12. R2 discloses a method of isolating a pre-selected whey protein or group of whey proteins from a solution. (Abstract)

13. R2 discloses the steps of the method as: a. contacting the whey protein with a pre-selected ion exchanger for a time and at a temperature to enable the absorption of proteins onto the absorbent, wherein the whey protein solution has a protein content of 5-20% by weight. The pH is selected based on the whey protein to be separated. B. Recovering either or both of the following: 1. the whey protein component adsorbed in step a, and 2. the proteins not adsorbed in step a. (Col. 2, line 53 to Col. 3, line 20).

14. R2 discloses the main proteins found in bovine whey to include lactoferrin, immunoglobulin, lactalbumin, lactoglobulin, bovine serum albumin, and glycomacropeptide (in sweet whey). R2 discloses that by selecting appropriate anion and cation exchangers and suitable pH, a particular whey protein or a group of whey proteins can be separated. (Col. 6, lines 15-52).

Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. Claims 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over DE 1922259 (Machine translation, hereinafter R1) in view of Ahmed et al. (US 5,756,680; hereinafter R3).

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17. R1 disclosure is hereby incorporated by reference as outlined in paragraphs 3-9 above.

18. R1 is silent regarding the used of the isolated biologically active proteins in animal feed.

19. R3 discloses a method for sequential separation of whey proteins. (Abstract).

20. R3 discloses that the whey protein fractions or the separated and purified proteins may be incorporated in dietary or pharmaceutical formulations including animal feed. (Example 8).

21. Therefore, it would have bee obvious to one of ordinary skill in the art, at the time the invention was made, to isolate the biologically active whey proteins as taught by R1 and incorporate it into animal feed as disclosed by R3. One would do so to improve the nutritional quality of the feed or incorporate antimicrobial proteins in whey into the animal feed. Absent any evidence and based on the combined teachings of the cited references, there would be a reasonable expectation of success in isolating and incorporating the biologically active materials into animal feed.

22. Claims 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ayers et al. (US 6,528,622; hereinafter R2) in view of Ahmed et al. (US 5,756,680; hereinafter R3).

23. The disclosure by R2 is hereby incorporated by reference as outlined in paragraphs 12-14 above.

24. R2 is silent regarding the incorporation of separated whey proteins into animal feed.

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25. R3 discloses a method for sequential separation of whey proteins. (Abstract).

26. R3 discloses that the whey protein fractions or the separated and purified proteins may be incorporated in dietary or pharmaceutical formulations including animal feed. (Example 8).

27. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to isolate the biologically active whey proteins as taught by R2 and incorporate it into animal feed as disclosed by R3. One would do so to improve the nutritional quality of the feed or incorporate antimicrobial proteins in whey into the animal feed. Absent any evidence and based on the combined teachings of the cited references, there would be a reasonable expectation of success in isolating and incorporating the biologically active materials into animal feed.

Conclusion

28. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 2,254, 241. While this reference teaches the separation of whey proteins by adsorption, it does not disclose the biological activity of the separated proteins as presently claim. US 3,078,164. While this reference teaches the separation of biological materials from solutions including milk whey, selective isolation of a particular biological material is not mentioned.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HAMID R. BADR whose telephone number is (571)270-3455. The examiner can normally be reached on M-T 5:30 to 4:30 (Friday off).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho can be reached on (571) 272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Hamid R Badr
Examiner
Art Unit 1794

/Callie E. Shosho/
Supervisory Patent Examiner, Art Unit 1794